

Applicant: STAHL, Martin et al.
Serial No.: To be assigned
Filed: Herewith
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Amendments to the Claims:

CLAIMS

Please amend the claims as follows and cancel without prejudice the claims marked as cancelled.

1. (Cancelled)
2. (Currently Amended) A screw ~~Screw~~-centrifugal pump (1)-in accordance with claim 11, wherein ~~1,~~ characterized in that the guide vane (5) is displaceable in the direction of the axis of rotation (2d) and is ~~is~~ fixably mounted.
3. (Currently Amended) A screw ~~Screw~~-centrifugal pump (1)-in accordance with ~~one of the preceding claims~~ claim 11, characterized in that ~~wherein~~ the guide vane (5) has a guide vane edge (5a) which, in the direction of rotation (4a), increasingly projects in the direction of the axis of rotation (2d) into the interior space of the impeller (2).
4. (Cancelled)
5. (Cancelled)
6. (Currently Amended) A screw ~~Screw~~ -centrifugal pump (1)-in accordance with claim 13, ~~5,~~ characterized in that wherein the blade edge section (2b) has a first tangent (T1) at the first point, ~~(P1), in that~~ the guide vane edge section (5b) has a second tangent (T2) at the second point (P2) and ~~in that these two~~ the first and second tangents (T1, T2) form an intersection angle (a) of at least 10 degrees ~~when considered from the inlet opening (3e) in a plane perpendicular to the axis of rotation.~~
7. (Currently Amended) A screw ~~Screw~~-centrifugal pump (1)-in accordance with claim 6, characterized in that wherein the intersection angle (a) ~~lies~~ is between 30 degrees and less than 180 degrees, ~~in particular between 60 degrees and 120 degrees.~~

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8. (Currently Amended) ~~A screw~~ Screw -centrifugal pump (1) in accordance with ~~one of the claims claim 12 -4 to -7,~~ characterized in that, wherein the blade edge section (2b) ~~and/or~~ or the guide vane edge section (5b) is formed at least partly as a cutting edge.
9. (Currently Amended) ~~A method~~ Method for the conveying of a liquid permeated with solid additions ~~by means of using~~ a screw-centrifugal pump (1) characterized ~~in that~~ wherein the liquid is directed with the aid of a guide vane (5) to ~~the a~~ blade entry edge (2a) of a rotating impeller (2) in such a way that at least one part of the solid additions slides along the blade entry edge.
10. (Currently Amended) ~~A method~~ Method in accordance with claim 9, characterized in ~~that~~ wherein a guide vane edge (5a) of the guide vane (5) and the blade entry edge (2a) mutually cooperate when the impeller (2) is rotating such that the solid addition located between the blade entry edge (2a) and the guide vane edge (5a) is mechanically comminuted by the blade and vane edges (2a, 5a) ~~and/or~~ or shifted in the flow direction ~~(S)~~ that rotating the impeller causes materials to flow.
11. (New) A screw-centrifugal pump comprising:
 - a pump housing;
 - an inlet opening;
 - an impeller comprising a spirally extending blade entry edge that rotates about an axis of rotation in a direction for carrying material away from the inlet opening; and
 - a guide vane, wherein the guide vane is disposed near the inlet opening and projects into an interior space surrounding the impeller.
12. (New) A screw-centrifugal pump in accordance with claim 3, wherein the guide vane edge includes a guide blade edge section and forms a fixed three-dimensional curve and the blade entry edge includes a blade edge section and forms a rotatable three-dimensional curve, wherein the fixed and rotatable three-dimensional curves extend in a mutually matched manner such the guide vane

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edge and the blade entry edge have a mutual spacing or mutually touch one another, depending on the position of the impeller.

13. (New) A screw-centrifugal pump in accordance with claim 12, comprising:

a first point on the blade edge section; and

a second point on the guide vane edge section, wherein the first point and the second point have the smallest mutual spacing between them of any two points on the first edge section and the guide vane edge section, respectively, and wherein rotating the impeller causes the first point and the second point to move along the axis of rotation in the same direction as fluids.

14. (New) A screw-centrifugal pump in accordance with claim 11 wherein the guide vane is fixed to the inlet opening.